

10/534583

JCIAROC'PDT/PD 11 MAY 2003

235670.ST25 - US Sequence Listing  
SEQUENCE LISTING

<110> KISHIMOTO, Takahide  
SOGABE, Atsushi  
OKA, Masanori

<120> MODIFIED SARCOSINE OXIDASE, PROCESS FOR PRODUCING THE SAME AND  
REAGENT COMPOSITION USING THE SAME

<130> 235670

<150> PCT/JP2003/014423  
<151> 2003-11-13

<150> JP2002-329427  
<151> 2002-11-13

<150> JP2002-329428  
<151> 2002-11-13

<150> JP2003-33641  
<151> 2003-02-12

<160> 14

<170> PatentIn version 3.1

<210> 1  
<211> 389  
<212> PRT  
<213> Arthrobacter sp. TE1826

<400> 1

Met Ser Ile Lys Lys Asp Tyr Asp Val Ile Val Val Gly Ala Gly Ser  
1 5 10 15

Met Gly Met Ala Ala Gly Tyr Tyr Leu Ser Lys Gln Gly Val Lys Thr  
20 25 30

Leu Leu Val Asp Ser Phe His Pro Pro His Thr Asn Gly Ser His His  
35 40 45

Gly Asp Thr Arg Ile Ile Arg His Ala Tyr Gly Glu Gly Arg Glu Tyr  
50 55 60

Val Pro Phe Ala Leu Arg Ala Gln Glu Leu Trp Tyr Glu Leu Glu Lys  
65 70 75 80

Glu Thr His His Lys Ile Phe Thr Lys Thr Gly Val Leu Val Phe Gly  
85 90 95

Pro Lys Gly Glu Ala Pro Phe Val Ala Glu Thr Met Glu Ala Ala Lys  
100 105 110

235670-ST25 - US Sequence Listing

Glu His Ser Leu Asp Val Asp Leu Leu Glu Gly Ser Glu Ile Asn Lys  
115 120 125

Arg Trp Pro Gly Val Thr Val Pro Glu Asn Tyr Asn Ala Ile Phe Glu  
130 135 140

Lys Asn Ser Gly Val Leu Phe Ser Glu Asn Cys Ile Arg Ala Tyr Arg  
145 150 155 160

Glu Leu Ala Glu Ala Asn Gly Ala Lys Val Leu Thr Tyr Thr Pro Val  
165 170 175

Glu Asp Phe Glu Ile Ala Glu Asp Phe Val Lys Ile Gln Thr Ala Tyr  
180 185 190

Gly Ser Phe Thr Ala Ser Lys Leu Ile Val Ser Met Gly Ala Trp Asn  
195 200 205

Ser Lys Leu Leu Ser Lys Leu Asn Ile Glu Ile Pro Leu Gln Pro Tyr  
210 215 220

Arg Gln Val Val Gly Phe Phe Glu Cys Asp Glu Lys Lys Tyr Ser Asn  
225 230 235 240

Thr His Gly Tyr Pro Ala Phe Met Val Glu Val Pro Thr Gly Ile Tyr  
245 250 255

Tyr Gly Phe Pro Ser Phe Gly Gly Cys Gly Leu Lys Ile Gly Tyr His  
260 265 270

Thr Tyr Gly Gln Lys Ile Asp Pro Asp Thr Ile Asn Arg Glu Phe Gly  
275 280 285

Ile Tyr Pro Glu Asp Glu Gly Asn Ile Arg Lys Phe Leu Glu Thr Tyr  
290 295 300

Met Pro Gly Ala Thr Gly Glu Leu Lys Ser Gly Ala Val Cys Met Tyr  
305 310 315 320

Thr Lys Thr Pro Asp Glu His Phe Val Ile Asp Leu His Pro Gln Phe  
325 330 335

Ser Asn Val Ala Ile Ala Ala Gly Phe Ser Gly His Gly Phe Lys Phe  
340 345 350

Ser Ser Val Val Gly Glu Thr Leu Ser Gln Leu Ala Val Thr Gly Lys  
355 360 365

## 235670.ST25 - US Sequence Listing

Thr Glu His Asp Ile Ser Ile Phe Ser Ile Asn Arg Pro Ala Leu Lys  
 370                   375                   380

Gln Lys Glu Thr Ile  
 385

<210> 2  
 <211> 1167  
 <212> DNA  
 <213> Arthrobacter SP. TE1826

<220>  
 <221> CDS  
 <222> (1)..(1167)  
 <223>

<400> 2	48
atg agt att aaa aaa gat tat gat gta att gtg gtt ggc gct ggt tcc	
Met Ser Ile Lys Lys Asp Tyr Asp Val Ile Val Val Gly Ala Gly Ser	
1                         5                   10                   15	
atg gga atg gca gct ggg tac tat ctg tct aaa caa ggt gtt aaa aca	96
Met Gly Met Ala Ala Gly Tyr Tyr Leu Ser Lys Gln Gly Val Lys Thr	
20                      25                   30	
cta ttg gta gat tca ttt cat cct ccc cat aca aat ggc agc cat cat	144
Leu Leu Val Asp Ser Phe His Pro Pro His Thr Asn Gly Ser His His	
35                      40                   45	
gcc gat aca ccg atc att cgt cac gca tat ggc gaa gga aga gag tat	192
Gly Asp Thr Arg Ile Ile Arg His Ala Tyr Gly Glu Gly Arg Glu Tyr	
50                      55                   60	
gta ccg ttt gcc ttg aga gca caa gag tta ttg tat gaa tta gaa aag	240
Val Pro Phe Ala Leu Arg Ala Gln Glu Leu Trp Tyr Glu Leu Glu Lys	
65                      70                   75                   80	
gag act cat cat aaa ata ttt aca aaa aca ggt gta ctc gtt ttt ggt	288
Glut Thr His His Lys Ile Phe Thr Lys Thr Gly Val Leu Val Phe Glu	
85                      90                   95	
cct aaa gga gaa gct cct ttc gtt gcc gaa aca atg gaa gcc gca aag	336
Pro Lys Gly Glu Ala Pro Phe Val Ala Glu Thr Met Glu Ala Ala Lys	
100                   105                   110	
gaa cat tca tta gat gtt gat tta cta gaa gga agt gaa ata aat aag	384
Glu His Ser Leu Asp Val Asp Leu Leu Glu Gly Ser Glu Ile Asn Lys	
115                   120                   125	
cgt tgg cca ggt gta acg gtt cct gag aat tat aat gct att ttt gaa	432
Arg Trp Pro Gly Val Thr Val Pro Glu Asn Tyr Asn Ala Ile Phe Glu	
130                   135                   140	
aaa aat tct ggt gtc tta ttt aat gtc aat gaa aat gtc att cgc gct tac cgt	480
Lys Asn Ser Gly Val Leu Phe Ser Glu Asn Cys Ile Arg Ala Tyr Arg	
145                   150                   155                   160	
gaa ttg gcg gaa gca aat ggt gcg aaa gtt cta acg tac aca ccc gtt	528
Glu Leu Ala Glu Ala Asn Gly Ala Lys Val Leu Thr Tyr Thr Pro Val	
165                   170                   175	

## 235670.ST25 - US Sequence Listing

gaa gat ttc gag att gcc gag gac ttc gtc aaa atc caa acc gcc tat	576
Glu Asp Phe Glu Ile Ala Glu Asp Phe Val Lys Ile Gln Thr Ala Tyr	
180 185 190	
ggc tcc ttt aca gcc agt aaa tta att gtt agc atg ggc gct tgg aat	624
Gly Ser Phe Thr Ala Ser Lys Leu Ile Val Ser Met Gly Ala Trp Asn	
195 200 205	
agc aaa ctg cta tca aaa tta aat att gaa atc cca ttg cag cca tac	672
Ser Lys Leu Leu Ser Lys Leu Asn Ile Glu Ile Pro Leu Gln Pro Tyr	
210 215 220	
cgt caa gtt gtc gga ttc ttc gaa tgt gat gaa aaa aaa tat agc aat	720
Arg Gln Val Val Gly Phe Phe Glu Cys Asp Glu Lys Lys Tyr Ser Asn	
225 230 235 240	
aca cat ggt tat ccg gcg ttc atg gtc gaa gtc cca act ggc atc tat	768
Thr His Gly Tyr Pro Ala Phe Met Val Glu Val Pro Thr Gly Ile Tyr	
245 250 255	
tac gga ttt cca aac ttc ggc tgc ttg aaa ata ggc tat cat	816
Tyr Gly Phe Pro Ser Phe Gly Gly Leu Lys Ile Gly Tyr His	
260 265 270	
acg tat ggt caa aaa atc gat cca gat acg att aat cgt gaa ttt ggt	864
Thr Tyr Gly Gln Lys Ile Asp Pro Asp Thr Ile Asn Arg Glu Phe Gly	
275 280 285	
att tac ccg gag gat gaa ggg aat att cgc aaa ttc ctg gaa aca tat	912
Ile Tyr Pro Glu Asp Glu Gly Asn Ile Arg Lys Phe Leu Glu Thr Tyr	
290 295 300	
atg ccg gga gca acc ggc gaa tta aaa agt ggg gca gtt tgc atg tac	960
Met Pro Gly Ala Thr Gly Glu Leu Lys Ser Gly Ala Val Cys Met Tyr	
305 310 315 320	
aca aaa aca cct gat gag cat ttc gtg att gat tta cat cct caa ttc	1008
Thr Lys Thr Pro Asp Glu His Phe Val Ile Asp Leu His Pro Gin Phe	
325 330 335	
tcg aat gtc gcg att gca gcc gga ttc tcc gga cat ggg ttt aaa ttc	1056
Ser Asn Val Ala Ile Ala Ala Gly Phe Ser Gly His Gly Phe Lys Phe	
340 345 350	
tca agc gta gtt ggt gaa aca tta agt caa tta gct gta acc ggt aaa	1104
Ser Ser Val Val Gly Glu Thr Leu Ser Gln Leu Ala Val Thr Gly Lys	
355 360 365	
aca gaa cac gat att tcc atc ttt tca atc aat cgc cct gct tta aaa	1152
Thr Glu His Asp Ile Ser Ile Phe Ser Ile Asn Arg Pro Ala Leu Lys	
370 375 380	
caa aaa gaa acg att	1167
Gln Lys Glu Thr Ile	
385	
<210> 3	
<211> 38	
<212> DNA	
<213> Artificial Sequence	

235670.ST25 - US Sequence Listing

<220> Arthrobacter SP. TE1826  
<223> Artificial Sequence

<400> 3  
gactcatcat aaaatattta caagaacagg tgtactcg 38

<210> 4  
<211> 36  
<212> DNA  
<213> Artificial Sequence

<220> Arthrobacter SP. TE1826  
<223> Artificial Sequence

<400> 4  
gtgtcttatt tagtgaaat attattcgcg cttacc 36

<210> 5  
<211> 36  
<212> DNA  
<213> Artificial Sequence

<220> Arthrobacter SP. TE1826  
<223> Artificial Sequence

<400> 5  
gaattggcgg aagcaaaagg tgcgaaaagt ctaacg 36

<210> 6  
<211> 38  
<212> DNA  
<213> Artificial Sequence

<220> Arthrobacter SP. TE1826  
<223> Artificial Sequence

<400> 6  
gccagtaaat taattgttag cgcgggcgt tggaatag 38

<210> 7  
<211> 38  
<212> DNA  
<213> Artificial Sequence

<220> Arthrobacter SP. TE1826  
<223> Artificial Sequence

<400> 7  
gaatagcaa ctgctaccaa aattaaatat tgaatcc 38

<210> 8  
<211> 36  
<212> DNA  
<213> Artificial Sequence

<220> Arthrobacter SP. TE1826  
<223> Artificial Sequence

235670.ST25 - US Sequence Listing

<400> 8 gtcggattct tcgaaagcga taaaaaaaaa tatagc 36  
<210> 9  
<211> 38  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Arthrobacter SP. TE1826  
  
<400> 9 gtgatgaaaaaaaatatacatgttacatccg 38  
gtgatgaaaaaaaatatacatgttacatccg  
  
<210> 10  
<211> 33  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Arthrobacter SP. TE1826  
  
<400> 10 ccggcggtca tggtccaggcccactggc atc 33  
ccggcggtca tggtccaggcccactggc atc  
  
<210> 11  
<211> 37  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Arthrobacter SP. TE1826  
  
<400> 11 gaaacattaa gtcaattagt tgtaaccggtaaaacag 37  
gaaacattaa gtcaattagt tgtaaccggtaaaacag  
  
<210> 12  
<211> 36  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Arthrobacter SP. TE1826  
  
<400> 12 caaaaacagg tgtactcggtttggtccta aaggag 36  
caaaaacagg tgtactcggtttggtccta aaggag  
  
<210> 13  
<211> 37  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Arthrobacter SP. TE1826  
  
<400> 13 gtttgcatgt acacaagaac acctgatgacatccg 37  
gtttgcatgt acacaagaac acctgatgacatccg

235670.ST25 - US Sequence Listing

<210> 14  
<211> 37  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Arthrobacter SP. TE1826

<400> 14  
ccagtaaatt aattgttagc gcgggcgcctt ggaatag

37